

## Education

- 2022 - **Doctor of Philosophy**, *Clemson University, School of Mathematics and Statistical Sciences*  
Current  
Funded by HHMI: Gilliam Fellowship Program #GT16840  
Funded by Clemson's Call Me Doctor Assistantship  
Southern Regional Education Board Doctoral Fellow  
Previously funded by LSAMP's Clemson University Bridge to Doctorate Fellowship  
Area of Study: Applied Statistics, Data Science, and Quantitative Justice  
Anticipated Graduation Date: May 2027
- 2022 **Master of Arts**, *The University of North Carolina - Greensboro*  
Mathematics
- 2020 **Bachelor of Arts**, *The University of North Carolina - Greensboro*  
Mathematics
- 2019 **Master of Science**, *North Carolina Agricultural and Technical State University*  
Clinical Mental Health Counseling: Marriage and Family Therapy  
Certificate
- 2017 **Bachelor of Science**, *North Carolina State University*  
Biological Sciences: Human Biology

## Research Experience

- 2022 - **The Institute for Computational and Experimental Research in Mathematics, Providence, RI - Data Science and Social Justice: Networks, Policy, and Education**  
2023  
  - o Worked with data scientists, mathematicians, engineers, and local community partners developing new computational methods for quantitative social justice research
- 2014 - **National Institutes of Health, North Carolina State University, Raleigh, NC - Initiative for Maximizing Student Diversity**  
2017  
  - o Conducted research on heart rate and lifespan trends
  - o Developed a Diversity Report Card for institutions of higher learning

- o Presented at local and national symposiums such as the NC State Annual Undergraduate Research Symposium, MAPRS, and ABRCMS
- 2016      **Johns Hopkins University: Diversity Summer Internship Program**
  - o Conducted research that analyzed the health disparities of African American men
- 2011      **NC ProjectSEED, North Carolina State University, Raleigh, NC**
  - o Explored the enhancement of medical practices by studying nanobiosensor properties

## Publications

- o Christina Hoffman, **Jakini Kauba**, Julie Reidy, and Thomas Weighill. "Proportionality in multi-winner RCV elections: A simulation study with ballot truncation" (2024).
- o **Jakini Kauba** and Thomas Weighill. "Topological analysis of U.S. city demographics" (2024).
- o Buckmire, R., Eaton, C. D., Hibdon Jr., J. E., **Kauba, J. A.**, Lewis, D., Ortega, O., Pabón, J.L., Roca, R. & Vindas-Meléndez, A.R. (2025). Quantifying and Documenting Gender-Based Inequalities in the Mathematical Sciences in the United States. In *Advances in Data Science: Women in Data Science and Mathematics (WiSDM) 2023* (pp. 335 - 352). Cham: Springer Nature Switzerland.

## Invited Talks

- 2025      **AWM Research Symposium**, A Stochastic Approach to Modeling Drug Delivery Using Spatial Poisson Process
- 2024      **The University of Melbourne**, A Stochastic Approach to Modeling Drug Delivery Using Spatial Poisson Process
- 2023      **MAA MathFest**, *A Topological Analysis of U.S. City Demographics*
- 2022      **International Conference on Advances in Interdisciplinary Statistics and Combinatorics**, *An Analysis of Demographic Trends Using Topological Data Analysis*

## Conference Presentations

- 2025      **HHMI Gilliam Annual Meeting (2025)**
- o Poster Presenter: *A Comprehensive Overview of the Effects of Anxiety, Depression, Insomnia, and Trauma on Cognitive Functioning*
- 2025      **Southeast Center for Mathematics and Biology (SCMB) Final Annual Symposium**
- o Poster Presenter: *A Stochastic Approach to Modeling Drug Delivery Using Spatial Poisson Process*
- 2025      **Math For All Conference**
- o Graduate Student Presentation: *A Stochastic Approach to Modeling Drug Delivery Using Spatial Poisson Process*
- 2024      **Clemson's Fourth Annual Women's Roundtable**
- o Panelist: *Building a supportive community through empowering discussions and the representation of dynamic women leaders in STEM*
- 2024      **HHMI Gilliam Annual Meeting (2024)**
- o Poster Presenter: *The Quantification of Endosomal Escape Using Spatial Poisson Processes*
- 2024      **Men of Color Summit**
- o Moderator/Presenter: *High School Roundtable Discussion - Charting the Course*
- 2024      **Math For All Conference**
- o Graduate Student Presentation: *Quantifying Hierarchy and Documenting Inequity in PhD-Granting Mathematical Sciences Departments in the United States*
- 2023      **Carolina Math Seminar**
- o Graduate Student Presentation: *A Topological Analysis of U.S. City Demographics*
  - o Graduate Student Recruitment Presentation: *Why Grad School?*
- 2023      **NAM MATHFest**
- o Graduate Student Oral Presentation: *A Topological Analysis of U.S. City Demographics*
  - o Graduate Student Speaker (Lightening Talk): *Building Your Village*
- 2023      **Joint Math Meeting**
- o Moderator/Panelist: Community Discussion on Quantitative Justice
    - Intersections of Mathematics, Data Science, and Social Justice
  - o Panelist: Re-envisioning Justice in Mathematics Research
- 2022      **NAM MATHFest**

- o Panelist: Graduate School Panel (Students only)

## Academic Service

### Professional Memberships

2023 - Current	<b>Mathematical Association of America (MAA)</b>
2022 - Current	<b>National Association of Mathematicians (NAM)</b> - <i>Graduate Student Representative</i>
2020 - Current	<b>American Mathematical Society (AMS)</b>
2019 - Current	<b>Association for Women in Mathematics (AWM)</b>

### Teaching Experience

2021 - Current	<b>JAK of All Trades Tutoring, <i>Founder</i></b> <ul style="list-style-type: none"> <li>o Offer tutoring services in mathematics, chemistry, biology, and writing</li> <li>o Develop tailored lesson plans and provide recorded lectures</li> <li>o Create homework, quizzes, and other exams to ensure an understanding of material</li> </ul>
2020 - 2022	<b>Graduate Teaching Assistant, University of North Carolina at Greensboro, Department of Mathematics and Statistics, Greensboro, NC</b> <ul style="list-style-type: none"> <li>o Tutored undergraduate students taking various math courses and provided guest lectures</li> <li>o Assisted professors by grading homework assignments and quizzes</li> </ul>

### Student Leadership

2025	Organized, moderated, and participated in the Graduate Student Panel at NAM's Undergraduate MATHFest
2024	Quantitative Biology Summer School <ul style="list-style-type: none"> <li>o Presented on drug delivery and the challenges of drug implementation</li> </ul>
2020 - Current	<b>Graduate Student Recruiter</b>

- Serve on panels and give various informative talks educating and inspiring undergraduate students to pursue graduate education in mathematics
  - Help create and organize extended recruitment events for underrepresented students interested in STEM graduate degrees (Stem ALL-IN and Men of Color)
  - Serve as a moderator for panelists in government, industry, and academic professions by fostering more discussion questions for undergraduate students curious about the impact of obtaining a graduate degree
  - Further normalize diversity in mathematics by providing research presentations in quantitative justice
  - Review resumes, personal statements, and cover letters for undergraduate students seeking support for graduate school applications
- 2023 - **National Association of Mathematicians: Services and Special Projects Committee**
- 2024
- Offer insight from the graduate student perspective in an effort to further enhance graduate student involvement and retention within NAM
- 2023 **Enhancing Diversity in Graduate Education (EDGE), Brown University, Providence, RI**
- Presented a Chalk Board Talk: *Optimal Separating Hyperplanes*
  - Developed skills in various mathematical topics
  - Further enhanced research presentation skills in addition to building a network of women mathematicians
- 2022 - **Black Graduate Student Association, Clemson University, Clemson, SC, Public Relations Chair**
- 2023
- Organized events catered to elevating the graduate student experience
  - Networked with faculty and staff members to arrange for guest speakers to encourage graduate students during their studies
- 2021 - **UNC-G Chapter of AWM, President**
- 2022
- Organized and hosted events catered to women in mathematics
  - Established an inclusive space for all who support women mathematicians
  - Fundraised and further enhanced a collaborative community for all women mathematicians
  - Scheduled meetings and semester retreats to maintain structure for all executive board members
- 2021 **Graduate Student Research Mentor (UNCG Statistics REU)**
- Served as a mentor to undergraduate students conducting statistics research
  - Assisted undergraduate students in their development of mathematical writing skills
  - Fostered the understanding of mathematical proofs as it related to coding methods in R Studio